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Claims

1. A premixed fuel burner assembly, comprising:
 - (a) a hollow tubular burner body having a longitudinal axis, said burner body having a longitudinal porting area having formed within a plurality of radially formed slots, said burner body having a open end and a closed end;
 - (b) a hollow tubular venturi tube positioned within said burner body along said longitudinal axis extending from said open end;
 - (c) a distribution plate having longitudinal mid-section and flanges, said flanges being coupled to the inside surface of burner body, said mid-section having a plurality of holes formed within, and said distribution plate being positioned within said burner body such that the holes of distribution plate are positioned adjacent to the radially formed slots within said burner body and extending from said open end to said closed end of burner body.
2. The fuel burner assembly of claim 1, wherein the holes of the distribution plate are of variable size.
3. The fuel burner assembly of claim 1, wherein the holes of the distribution plate are larger at the open end and smaller at the closed end.
4. The fuel burner assembly of claim 1, wherein said holes of the distribution plate are circular.
5. The fuel burner assembly of claim 1, wherein said venturi tube extends a length from said open end that is substantially shorter than the length of said distribution plate.

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6. The fuel burner assembly of claim 1, wherein said porting slots are rectangular.
7. A method of making a fuel burner assembly, said method comprising the
- 5 steps:
- (a) forming a tubular burner body having an open end and a closed end;
 - (b) cutting a plurality of radial slots formed within said tubular body;
 - (c) forming a hollow tubular venturi tube and positioning it within said burner body along said longitudinal axis extending from said open end
 - 10 partially into said burner body;
 - (d) forming a distribution plate with longitudinal mid-section and flanges;
 - (e) cutting a plurality of holes within the mid-section; and
 - (f) coupling the flanges of the distribution plate to the inside surface of burner body such that the distribution plate is positioned between the
 - 15 inside surface of the burner body and the venturi tube and such that the holes within the mid-section are positioned adjacent the slots of said burner body.
9. The method of claim 7, wherein the length of said venturi tube extends for
- 20 only a portion of the entire length of the burner body.
10. The method of claim 7, wherein the length of said distribution plate extends the entire length of the burner body.
- 25 11. The method of claim 7, wherein step (e) comprises cutting holes within the distribution plate of variable size.
12. The method of claim 7, wherein the holes within the distribution plate are larger at the first end and smaller at the second end.
- 30 13. The method of claim 7, wherein the porting slots are cut to be rectangular.